



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lieutenant Governor

RICHARD K. SULLIVAN JR.  
Secretary

KENNETH L. KIMMELL  
Commissioner

# **Background Information and Technical Support Document for Proposed Amendments (2012 Program Review) to:**

**310 CMR 7.70**

**“Massachusetts CO<sub>2</sub> Budget Trading Program”**

**Regulatory Authority**

**M.G.L. c. 111, sections 142A-N and M.G.L. c. 21A, § 22**

**June 2013**

## Contents

I.	INTRODUCTION .....	3
II.	BACKGROUND AND PURPOSE .....	3
III.	DESCRIPTION OF THE PROPOSED AMMENDMENTS .....	7
A.	Size and Structure of the Regional Cap and Massachusetts State Budget .....	7
B.	Budget Adjustments .....	8
C.	Interim Control Periods .....	8
D.	Cost Containment Reserve .....	9
E.	Offset Allowances .....	10
F.	Undistributed and Unsold CO <sub>2</sub> Allowances .....	11
G.	Miscellaneous .....	11
IV.	ECONOMIC IMPACTS .....	12
V.	SMALL BUSINESS IMPACT STATEMENT .....	13
VI.	AGRICULTURAL IMPACTS .....	13
VII.	IMPACT ON MASSACHUSETTS MUNICIPALITIES.....	13
VIII.	MASSACHUSETTS ENVIRONMENTAL POLICY ACT (MEPA).....	13
IX.	IMPACTS ON OTHER PROGRAMS – AIR TOXICS.....	14
X.	PUBLIC PARTICIPATION .....	14

## **I. INTRODUCTION**

The Massachusetts Department of Environmental Protection (MassDEP) is proposing to amend regulation 310 CMR 7.70 - The Massachusetts CO<sub>2</sub> Budget Trading Program. This existing regulation implements the Regional Greenhouse Gas Initiative (RGGI) in the Commonwealth. RGGI is a cap and trade program limiting carbon dioxide (CO<sub>2</sub>) emissions from power plants in the region. The regulations at 310 CMR 7.70 establish a compliance obligation on fossil fuel fired electricity generating units in the Commonwealth greater than 25 megawatts in size that is intended to account for and reduce their CO<sub>2</sub> emissions. Each of the RGGI participating states<sup>1</sup> has a similar regulation to implement the RGGI program in those states. The individual state RGGI regulations are crafted based on a common template, the RGGI Model Rule.

The proposed amendments to 310 CMR 7.70 would implement the program changes contained in the RGGI Updated Model Rule<sup>2</sup> and RGGI 2012 Program Review Recommendations Summary.<sup>3</sup> The purpose of the RGGI Updated Model Rule is to serve as a template for similar changes to each of the participating state's existing CO<sub>2</sub> Budget Trading Programs. The changes contained in the RGGI Updated Model Rule were agreed to by the nine RGGI participating states after a comprehensive two-year program review. Those changes strengthen the RGGI program, make it more effective, and realign the regional cap with current emissions levels, which are significantly lower than the current regional cap.

The changes include:

- A reduction in the regional CO<sub>2</sub> budget (the RGGI cap) for the years 2014 through 2020,
- Adjustments to the RGGI cap in the years 2014-2020 to account for the private bank of allowances,
- The establishment of a Cost Containment Reserve (CCR) to mitigate price spikes should they occur by providing a limited quantity of allowances in addition to the cap if established price thresholds are exceeded,
- Updates to the RGGI offsets program, including a new forestry protocol,
- The creation of interim control periods, which require a partial compliance demonstration in the first two years of each three year control period, and
- Numerous administrative updates, including updates for all documents incorporated by reference.

## **II. BACKGROUND AND PURPOSE**

The RGGI is an ongoing effort among Northeast and Mid-Atlantic States to develop and implement a regional CO<sub>2</sub> cap-and-trade program aimed at stabilizing and then reducing CO<sub>2</sub> emissions from large fossil-fuel-fired electricity generating units in the region. The regional program is implemented through similar regulations in each of the participating states.

---

<sup>1</sup> Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont

<sup>2</sup> [http://rggi.org/docs/ProgramReview/FinalProgramReviewMaterials/Model\\_Rule\\_FINAL.pdf](http://rggi.org/docs/ProgramReview/FinalProgramReviewMaterials/Model_Rule_FINAL.pdf)

<sup>3</sup> [http://rggi.org/docs/ProgramReview/FinalProgramReviewMaterials/Recommendations\\_Summary.pdf](http://rggi.org/docs/ProgramReview/FinalProgramReviewMaterials/Recommendations_Summary.pdf)

When the program was originally established in 2005, a Memorandum of Understanding (MOU) was developed which outlined the RGGI program elements including:

- The level of the regional emissions cap,
- The apportionment of each state's portion of the regional cap,
- The schedule for reductions in the cap out through the year 2018,
- A three year compliance period,
- Provisions for Offsets (reductions in greenhouse gases from sources outside the electric generating sector),
- Safety valve price triggers that would expand the percentage of offset allowances that could be used to demonstrate compliance; extend the compliance period from three to four years; and allow the use of international offsets,
- An allocation of at least 25% of allowances for consumer benefit or strategic energy purposes,
- Provisions for the creation of Early Reduction Credits, and
- Provisions for the banking of allowances.

The MOU also specified:

- The development of a Model Rule to serve as the framework for the creation of statutory and/or regulatory action,
- A January 2009 Program Launch date,
- The establishment of a Regional Organization in order to facilitate the ongoing implementation of the program,
- Terms for the addition or removal of signatory states,
- A commitment to ongoing program monitoring and a comprehensive program review in 2012, and
- A commitment to Complementary Energy Policies that decrease the use of higher polluting generation while maintaining economic growth.

On January 18, 2007, Massachusetts Governor Deval Patrick signed the RGGI Memorandum of Understanding (MOU),<sup>4</sup> committing the Commonwealth to propose a CO<sub>2</sub> cap-and-trade program substantially as reflected in the RGGI Model Rule.<sup>5</sup>

In January of 2008, MassDEP promulgated 310 CMR 7.70<sup>6</sup> - The Massachusetts CO<sub>2</sub> Budget Trading Program along with amendments to 310 CMR 7.29 – Emissions Standards for Power Plants and 310 CMR 7.00 Appendix B (7) Emission Banking, Trading and Averaging.<sup>7</sup> The

---

<sup>4</sup> <http://rggi.org/agreement.htm>

<sup>5</sup> <http://rggi.org>

<sup>6</sup> <http://www.mass.gov/dep/service/regulations/rggiregf.pdf>

<sup>7</sup> <http://www.mass.gov/dep/air/laws/regulati.htm>

regulations at 310 CMR 7.70 established the rules for implementing the RGGI cap and trade program within the Commonwealth.<sup>8</sup>

MassDEP adopted RGGI because it believed that implementing the CO<sub>2</sub> Budget Trading Program provides the following benefits to Massachusetts:

- Reduction in the long-term costs of addressing climate change. By acting now, Massachusetts may be able to avoid more disruptive measures later.<sup>9</sup>
- Capture of environmental co-benefits. Reducing carbon emissions from the electric generators will result in reductions in the emissions of other pollutants associated with fossil fuel-based electricity generation (e.g., NO<sub>x</sub>, SO<sub>2</sub>, and Mercury). Additional co-benefits will be realized through the offsets component of the program, which provides incentives for forestry management, improved agricultural manure management, and reduced consumption of natural gas, propane, and home heating oil. The auction of allowances generates revenue used to benefit the environment and energy planning (e.g., through investments in energy efficiency and clean energy technologies).
- Development of new technology. By establishing a cost for emitting CO<sub>2</sub>, the CO<sub>2</sub> Budget Trading Program provides a market incentive for developing and deploying technologies that improve the fuel efficiency of electric generation, generate electricity from non-carbon emitting resources (e.g., wind and solar power), and reduce CO<sub>2</sub> emissions from combustion sources.
- Promotion of expanded energy efficiency. The offsets provisions provide incentives for end-use efficiency improvements. In addition, auction proceeds are used for significant energy efficiency programs in the Commonwealth.
- Stimulation of economic development. Massachusetts leads the US in clean energy technology. The CO<sub>2</sub> Budget Trading Program reinforces this leadership by encouraging the growth of clean energy technologies in the region. This stimulus will be applied indirectly by establishing a cost for carbon emissions, and directly through programs funded by CO<sub>2</sub> allowance auction proceeds.

In July of 2008, Governor Patrick signed into law the Massachusetts Green Communities Act<sup>10</sup> (GCA), Chapter 169 of the Acts of 2008. Chapter 169, Section 22 (b) (M.G.L. c. 21A, § 22) provides MassDEP with the legislative authority to participate in RGGI and adopt cap and trade program regulations to implement RGGI. Specifically, the GCA required the Department of Environmental Protection, in consultation with the Department of Energy Resources, to adopt

---

<sup>8</sup> For more information on the adoption of the RGGI program go to <http://www.mass.gov/dep/service/regulations/regsarch.htm>

<sup>9</sup> Note that when ranked against the nations of the world, RGGI MOU-signatory states represent one of the ten largest sources of carbon dioxide emissions from energy use.

<sup>10</sup> <http://www.malegislature.gov/Laws/SessionLaws/Acts/2008/Chapter169>

rules and regulations establishing a CO<sub>2</sub> cap and trade program to limit and reduce the total CO<sub>2</sub> emissions released by electric generating stations that generate electric power. The GCA further required that all CO<sub>2</sub> allowances under the program, with the exception of approximately 2% of the annual state allowance budget, be offered for sale at auction and defined how those auction proceeds should be used.

In addition, in August of 2008, Governor Patrick signed into law the Massachusetts Global Warming Solutions Act<sup>11</sup> (GWSA), Chapter 298 of the Acts of 2008 to address the challenges of climate change. In December 2010, as required by GWSA (M.G.L. c. 21N, §4), the Secretary of the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) issued the Massachusetts Clean Energy and Climate Plan for 2020 (CECP).<sup>12</sup> The CECP includes the *Regional Greenhouse Gas Initiative* as one of the programs that will help the Commonwealth achieve reductions in GHG emissions. The existing RGGI regulations at 310 CMR 7.70, along with the proposed amendments to RGGI, will continue to help the Commonwealth implement the regulatory component of the CECP to reduce the GHG emissions that contribute to climate change.

Under the RGGI program, Massachusetts auctions nearly 100 percent of its CO<sub>2</sub> allowances. Procedures for auctioning allowances are governed by regulations promulgated by the Department of Energy Resources at 225 CMR 13.00.<sup>13</sup> On January 1, 2009, as per the provisions of 310 CMR 7.70 and 225 CMR 13.00, the Massachusetts CO<sub>2</sub> Budget Trading Program began to regulate CO<sub>2</sub> emissions from fossil-fuel-fired units in the Commonwealth that serve an electric generator with a nameplate capacity of 25 megawatts. The first three years of the RGGI program demonstrated the successful operation of the emissions and allowance tracking system database, the allowance auction platform and procedures, market monitoring procedures, and the compliance demonstration process. One hundred percent of the 28 facilities in the Commonwealth successfully demonstrated compliance during the first three year control period. However, due to significant structural changes in the electric generating sector largely due to the unprecedented increase in natural gas supplies resulting from shale gas development, actual CO<sub>2</sub> emission in the RGGI region are now dramatically lower than the regional emissions cap. (Regional emissions were approximately 92 million tons in 2012 while the existing regional cap level is 165 million tons.)

In 2010, the participating states began to prepare for the comprehensive program review called for in the original RGGI MOU. Between September of 2010 and January of 2013, the participating states convened more than a dozen stakeholder meetings, webinars and learning sessions. These sessions were well attended and helpful comments were received. All documents from the stakeholder process can be found at [rggi.org](http://rggi.org).

The RGGI Program Review revealed:

---

<sup>11</sup> <http://www.malegislature.gov/Laws/SessionLaws/Acts/2008/Chapter298>

<sup>12</sup> The CECP is available at <http://www.mass.gov/eea/air-water-climate-change/climate-change/mass-clean-energy-and-climate-plan.html>. The RGGI policy is described on pp. 42.

<sup>13</sup> <http://www.mass.gov/eea/docs/doer/rggi-auction-reg-final.pdf>

- A significant excess supply of allowances relative to actual emission levels in the region. There are a number of reasons for the significant difference between the current regional cap level and recent regional emissions levels. These reasons include: low natural gas prices which have reduced the use of coal, increased use of renewable energy in place of fossil fuels, reduced electric demand due to energy efficiency measures, weather conditions, and economic activity levels.<sup>14</sup>
- The current cost control measures in the program, which are based upon expansion of the percentage of offset allowances allowable for compliance, would likely be ineffective at controlling costs in the event of price spikes.

As a result of these findings, the participating states have issued an Updated Model Rule<sup>15</sup>, and each state has committed to establish in statute and/or regulation amendments to their respective CO<sub>2</sub> Budget Trading Program that are substantially consistent with that Updated Model Rule. As was the case during the original development of the RGGI program, the Updated Model Rule is intended to provide the framework for individual state statutory and/or regulatory action.

As part of the 2012 program review, the RGGI states conducted extensive air emissions modeling, and customer bill analysis, to determine the appropriate level of the new cap that would achieve a significant reduction in GHG emissions, but not cause a significant negative financial effect on ratepayers. Moreover, the RGGI states conducted several stakeholder meetings and webinars to receive input on the results of the program review and the proposed amendments to the model rule. They received extensive feedback from environmental groups, retail electricity suppliers, power generation companies and consultants. Most of the feedback supported the tighter regional cap of 91 million tons. The feedback also supported the creation of the CCR above the cap with a CCR trigger price, and a new minimum auction reserve price. Several comments supported the creation of a new forestry protocol, mirrored after California's existing forestry protocol, and the retirement of unsold allowances. Although there were very few comments that opposed the proposed amendments to the model rule, some comments opposed the creation of an interim control period because they believed it could have an impact on market and auction strategies.

In addition, MassDEP and DOER hosted a MA stakeholder meeting on May 31, 2012, to discuss the issues noted above. About 20 people attended. Environmental NGOs urged the Commonwealth to push for the lowest cap as a means of fulfilling greenhouse gas reduction obligations. Industry representatives did not oppose lowering the cap but asked questions about other program changes under investigation, such as requiring compliance demonstration annually, rather than every three years.

---

<sup>14</sup> The New York State Energy Research and Development Authority issued a draft white paper "The Relative Effects of Various Factors on RGGI Electricity Sector Emissions 2005-2009" which details the reasons for the significant difference between the emissions levels projected in 2005 when the original program cap was set and actual emission levels experienced in the region. See, [http://rggi.org/docs/Retrospective\\_Analysis\\_Draft\\_White\\_Paper.pdf](http://rggi.org/docs/Retrospective_Analysis_Draft_White_Paper.pdf)

<sup>15</sup> See, [http://rggi.org/docs/ProgramReview/FinalProgramReviewMaterials/Model\\_Rule\\_FINAL.pdf](http://rggi.org/docs/ProgramReview/FinalProgramReviewMaterials/Model_Rule_FINAL.pdf)

The RGGI Program changes reflected in the Updated Model Rule are detailed in Section III of this document.

### **III. DESCRIPTION OF THE PROPOSED AMMENDMENTS TO THE MASSACHUSETTS CO<sub>2</sub> BUDGET TRADING PROGRAM REGULATION**

#### **A. Size and Structure of the Regional Cap and Massachusetts State Budget**

The regional emissions cap in 2014 will be 91 million tons of CO<sub>2</sub>. The cap will be reduced by 2.5 percent per year in the years 2015 through 2020. During program review, the participating states conducted electric system modeling and macroeconomic analysis for a number of proposed cap levels and key program design elements. The regional cap of 91 million tons of CO<sub>2</sub> beginning in 2014 and then reduced by 2.5 percent per year in the years 2015 through 2020, realigned the cap level closely with current regional emission levels, which were approximately 92 million tons of CO<sub>2</sub> in 2012. The lower cap and the 2.5 percent per year reduction in the cap parallel the reduction rate established under the original RGGI program framework and the stated goals of the original program. Macroeconomic analysis indicated the overall regional economic impacts resulting from the 91 cap were slightly positive, while customer bill impact analysis indicated that the resulting customer bill impacts for all classes of customers were modest (see Sections IV and V of this document for additional detail).

Massachusetts' portion of the regional emissions cap is approximately 16.14 percent. Therefore, MassDEP is proposing the following Massachusetts CO<sub>2</sub> Trading Program base budgets by year:

• 2014	14,487,106 tons of CO <sub>2</sub>
• 2015	14,124,929 tons of CO <sub>2</sub>
• 2016	13,771,805 tons of CO <sub>2</sub> <sup>16</sup>
• 2017	13,612,882 tons of CO <sub>2</sub>
• 2018	13,272,560 tons of CO <sub>2</sub>
• 2019	12,940,746 tons of CO <sub>2</sub>
• 2020 and each succeeding calendar year	12,617,227 tons of CO <sub>2</sub>

These proposed budgets will replace higher 2014 – 2018 budgets in the current regulation.<sup>17</sup>

---

<sup>16</sup> 2014, 2015, and 2016 base budgets reflect a voluntary transfer of 200,000 allowances in each year to RI.

<sup>17</sup> As the regulation requires that allowances be created three years in advance, MassDEP has already created 2014 – 2016 allowances consistent with the old budgets. All of these allowances are held in state accounts. After the amendments are finalized, MassDEP will ensure that the total number of allowances in these accounts reflects the revised budgets, including the adjustments described below.



## **B. Budget Adjustments**

As part of the determination of the RGGI Regional Cap for the years 2014 through 2020, consideration was given to the private bank of allowances that will be in circulation when the new Cap begins in 2014. These allowances represent excess allowances (more than the total quantity of allowances necessary for all sources regulated under the program to demonstrate compliance) purchased during the 2009 through 2013 period, during which the regional emissions cap was and is expected to be far in excess of the regional emissions levels. MassDEP is proposing the Regional Cap and the resulting Massachusetts CO<sub>2</sub> Budget Trading Program base budgets be adjusted downward in two distinct budget adjustments to account for the existing privately held allowances that are in addition to the total quantity of CO<sub>2</sub> emissions emitted from all budget sources in all the participating states from program inception in 2009 through 2013. To accomplish this goal, MassDEP (and the other RGGI states) are proposing to add the following interim adjustments to the RGGI program.

- The First Control Period Interim Adjustment for Banked Allowances (first adjustment) adjusts the Massachusetts CO<sub>2</sub> Budget Trading Program base budget to account for Massachusetts' share of 100 percent of the first control period private bank of allowances (vintages 2009, 2010, and 2011) held by market participants as of the end of the first control period, which are in addition to the total quantity of first control period emissions. This change for the region is expected to be approximately 50 million tons. The first adjustment will be determined by January 15, 2014. The adjustment will be made over the seven year period 2014 through 2020.
- The Second Control Period Interim Adjustment for Banked Allowances (second adjustment) adjusts the Massachusetts CO<sub>2</sub> Budget Trading Program base budget to account for Massachusetts' share of 100 percent of the 2012 and 2013 vintage allowances held by market participants as of the end of 2013, which are in addition to the total quantity of 2012 and 2013 emissions. This change for the region is expected to be approximately 70 million tons. The second adjustment will be determined by March 15, 2014. The adjustment will be made over the six year period 2015 through 2020.

MassDEP is proposing the interim budget adjustments to account for the existing privately held excess allowances. The adjustments will be made over a seven year period to provide market participants with ample notice of the intent to adjust for these allowances, while realigning the long term supply of allowances with the projected emission quantities for that period (projected by the electric system modeling).

## **C. Interim Control Periods**

MassDEP is proposing a new general requirement that defines each of the first two years of each three-year control period as Interim Control Periods. Beginning in 2015, sources are required to hold allowances to cover 50 percent of emissions for each Interim Control Period, subject to the existing true-up process and a March 1 deadline. Sources failing to meet this requirement will be

deemed to have Excess Interim Emissions. Each ton of Excess Interim Emissions will be considered a violation, subject to enforcement on an annual basis. There will be no “treble damages” provisions for Excess Interim Emissions.

The final compliance true-up at the end of the three-year control period will continue to require sources to hold allowances to cover 100 percent of the emissions for the three years. The allowances already deducted to meet each of the two annual Interim Control Period obligations will be subtracted from the three-year compliance true-up obligation. The existing “treble damages” provision, for any excess emissions at the end of the three-year control period, will remain unchanged.

The Interim Control Periods are being proposed to reduce the risk of compliance obligation default in cases where a CO<sub>2</sub> Budget Source ceases operation. It will also provide certainty to MassDEP that the CO<sub>2</sub> Budget Sources are accumulating enough CO<sub>2</sub> allowances to cover their CO<sub>2</sub> emissions.

#### **D. Cost Containment Reserve**

MassDEP is proposing the creation and use of a cost containment reserve (CCR) that will provide flexibility and cost containment for the program. MassDEP will allocate allowances to the Massachusetts Auction Account. Administration of the CCR will be defined in the Massachusetts Department of Energy Resources regulation 225 CMR 13.00 as described below. The CCR will consist of a fixed quantity of allowances, in addition to the cap, that would be held in reserve, only to be made available for sale if allowance prices exceed predefined price levels. There will be an annual limit on the quantity of allowances that can be withdrawn from the CCR. In 2014, the annual limit will be 5 million allowances. The annual limit in 2015 and beyond will be 10 million allowances. The CCR allowances will be made available immediately in any auction in which demand for allowances at prices above the CCR trigger price exceeds the supply of allowances offered for sale in that auction prior to the addition of any CCR allowances. If the CCR is triggered, the CCR allowances will only be sold at or above the CCR trigger price. The CCR Trigger Prices are proposed to be: \$4 in 2014, \$6 in 2015, \$8 in 2016, and \$10 in 2017. Each year after 2017, the CCR trigger price will increase by 2.5 percent. Allowances from the CCR will be fully fungible and can be used for compliance in any of the RGGI states. The CCR will be populated with allowances from each of the participating states in a proportion equal to each respective state’s portion of the overall regional emissions budget (the regional cap). The proposed size of the CCR and the proposed CCR Trigger Prices were determined based upon a series of iterative modeling runs. The CCR size and CCR Trigger Prices are intended to balance cost control (mitigation of short term price spikes) and the overall environmental integrity of the regional emissions cap.

The CCR is being proposed to simplify and improve the cost containment mechanism for the program. The CCR will provide the ability for an immediate injection of additional allowances in the next quarterly auction in the event price triggers are exceeded. This addresses the concern expressed by stakeholders that the current cost containment mechanism (expansion of the percent

of offset allowances allowable to demonstrate compliance) would be slow to react and ineffective.

MassDEP is proposing to eliminate the following provisions from the existing regulation, and replacing them with the new CCR provisions:

- Stage One and Stage Two Threshold Prices, at 310 CMR 7.70(1)(b),
- Stage One and Stage Two Trigger Events, at 310 CMR 7.70(1)(b),
- Market Settling Period, at 310 CMR 7.70(1)(b),
- The expansion of the percentage of offset allowances that can be used to demonstrate compliance when Stage One or Stage Two Trigger Event occurs, at 310 CMR 7.70(6)(e)1.c.ii. & iii,
- The awarding of CO<sub>2</sub> offset allowances for CO<sub>2</sub> emissions credit retirements after the occurrence of a stage two trigger event, at 310 CMR 7.70(10)(c)2.b., and
- The extension of a control period from three to four years after the occurrence of a stage two trigger event at 310 CMR 7.70(1)(b).

Removal of these definitions and provisions simplifies the regulation while providing a faster acting cost containment mechanism, the CCR, which MassDEP believes will effectively balance the environmental integrity of the cap with a fast acting level of insurance against price spikes.

## **E. Offset Allowances**

MassDEP is proposing to replace the existing Afforestation offset category with a new offset category known as “Sequestration of carbon due to reforestation, improved forest management or avoided conversion.” MassDEP intends to incorporate by reference the RGGI U.S. Forests Offset Protocol which has been developed by the participating states, based mainly on the California Air Resources Board (CARB) U.S. Forests Offset Protocol. This protocol includes:

- Improved Forest Management;
- Avoided Conversion; and
- Reforestation.

MassDEP is proposing the new offset category to expand the options for compliance, provide incentives for best practices in the forestry sector, and to be more consistent with the California Forests Offset Protocol.

While MassDEP is not proposing substantive changes to any offset category other than forestry, project developers should be aware that other planned MassDEP regulatory changes could, when finalized, affect eligibility determinations for projects in the *reduction of emissions of sulfur hexafluoride* and *avoided methane emissions from agricultural manure management operations* categories. In particular, some projects in these categories would no

longer be able to satisfy additionality requirements, such as the general prohibition against crediting projects that are necessary to comply with other (non-RGGI) regulations.<sup>18</sup>

## **F. Undistributed and Unsold CO<sub>2</sub> Allowances**

MassDEP is proposing to add language providing it with the ability to retire unsold and undistributed allowances at the end of each control period. MassDEP anticipates that some portion of the allowances in the Greenhouse Gas Credit Exchange Set-aside Account will remain undistributed and will be retired. The Greenhouse Gas Credit Exchange Set-aside was established to provide a transition from the regulatory structure of CO<sub>2</sub> emissions under 310 CMR 7.29 – Emission Standards for Power Plants and GHG Credits generated under 310 CMR 7.00 Appendix B (7).

## **G. Miscellaneous**

The existing Massachusetts CO<sub>2</sub> Budget Trading Program rule includes provisions in the End-Use Energy Efficiency offset category that differentiated projects commenced prior to a specific date that has come and gone. MassDEP is proposing to remove these provisions since they are no longer relevant. Similarly, MassDEP is proposing to eliminate the Early Reduction Allowance (ERA) provisions since the window of time to create ERAs has expired.

MassDEP is proposing a minimum reserve price in calendar year 2014 of \$2.00. Each calendar year thereafter the reserve price will increase by 2.5 percent. This fixed percentage increase will replace the Consumer Price Index inflation adjustment in the current rule.

MassDEP proposes to update all documents that are incorporated by reference in the existing Massachusetts CO<sub>2</sub> Budget Trading Program rule.

Lastly, MassDEP proposes to make other technical changes to the existing Massachusetts CO<sub>2</sub> Budget Trading Program rule to improve consistency with the Model Rule.

## **VI. ECONOMIC IMPACTS**

The nine participating states contracted through RGGI Inc. to hire the ICF consulting firm to use its Integrated Planning Model (IPM) to project electricity sector and economic impacts of numerous proposed potential policy change scenarios. Impacts of these potential policy change scenarios were compared against the current RGGI program. Sensitivity analyses were conducted to examine impacts resulting from changes in key input variables such as relative fuel

---

<sup>18</sup> Additional information about RGGI offset standards is available at <http://www.rggi.org/market/offsets>. Information about the planned changes to other regulations is available at <http://www.mass.gov/dep/air/climate/sf6mtg.htm> (for the sulfur hexafluoride category; see reference to the Massachusetts Clean Energy and Climate Plan for 2020) and <http://www.mass.gov/dep/public/committee/orgplanf.pdf> and <http://www.mass.gov/dep/public/committee/oscs924.pdf> (for the manure management category).

prices, and electricity load projections. The IPM model outputs were then used as inputs to economic analyses including REMI macroeconomic modeling and customer bill impact analyses. The REMI modeling showed regional economic impacts (cumulative change in Gross State Product, cumulative change in employment, and cumulative change in real personal income) resulting from the 91 million ton cap beginning in 2014 to be slightly positive.

IPM modeling results are available at the RGGI Website at:

[http://rggi.org/design/program\\_review/materials\\_by\\_topic/ipm\\_modeling](http://rggi.org/design/program_review/materials_by_topic/ipm_modeling)

REMI modeling results are available at the RGGI Website at:

[http://rggi.org/docs/ProgramReview/February11/13\\_02\\_11\\_REMI.pdf](http://rggi.org/docs/ProgramReview/February11/13_02_11_REMI.pdf)

## **V. SMALL BUSINESS IMPACT STATEMENT**

The proposed regulations are expected to have minimal impact on small businesses. Bill impact analysis conducted estimated that the average commercial customer monthly electric bill of \$455 would increase by less than \$4 (less than a 1% increase). MassDEP notes that RGGI auction revenues are used to fund energy efficiency investments throughout the Commonwealth. Small businesses that invest in energy efficiency measures through programs like MassSave<sup>19</sup> can achieve significant electricity bill cost savings.

## **VI. AGRICULTURAL IMPACTS**

The proposed regulations are not expected to have any negative impacts on agricultural production in Massachusetts. Positive impacts may result from reduced GHG emissions. For example, it is possible that increases in the frequency of extreme weather events that can destroy crops could be avoided if GHG emissions are reduced.

## **VII. IMPACT ON MASSACHUSETTS MUNICIPALITIES**

The proposed regulations will not negatively affect cities or towns. While the four communities that own electric power plants would be subject to the regulation and incur the cost of CO<sub>2</sub> allowances as part of their operating costs, many municipalities throughout the Commonwealth will benefit significantly from investment in energy efficiency measures funded partly through RGGI auction proceeds through the Green Communities<sup>20</sup> program. Furthermore, MassDEP notes that ownership and operation of a power plant, which municipalities may voluntarily undertake, is not a mandated municipal service. Therefore, costs associated with operation of a power plant are not mandated costs subject to the restrictions of Proposition 2 ½ (Town of Norfolk v. Department of Environmental Quality Engineering, 407 Mass 233 (1990)).

## **VIII. MASSACHUSETTS ENVIRONMENTAL POLICY ACT (MEPA)**

---

<sup>19</sup> <http://www.masssave.com/>

<sup>20</sup> <http://www.mass.gov/eea/energy-utilities-clean-tech/green-communities/>

Pursuant to 301 CMR 11.03(12) (MEPA Regulations), these proposed regulations will not reduce standards for environmental protection, opportunities for public participation in permitting or other review processes, or public access to information generated or provided in accordance with these regulations. Promulgation of these regulations, therefore, does not require the filing of an Environmental Notification Form under MEPA.

## **IX. IMPACTS ON OTHER PROGRAMS – AIR TOXICS**

Air toxics are a group of chemical air contaminants that are associated with significant environmental impacts or adverse health effects such as cancer, reproductive effects and birth defects. The federal Clean Air Act requires EPA to promulgate source-specific controls based on Maximum Achievable Control Technologies (MACT) for air toxics. MassDEP implements MACT standards for major sources as EPA promulgates them. In addition, MassDEP controls air toxics through reductions of criteria pollutants and through its Toxics Use Reduction Program. Toxics use reduction is a MassDEP priority. Toxics use reduction is defined as in-plant practices that reduce or eliminate the total mass of contaminants discharged to the environment. The proposed regulations will not affect toxics. Reducing carbon emissions from the electric generators could lead to reductions in the emissions of other pollutants associated with fossil fuel-based electricity generation (e.g., NO<sub>x</sub>, SO<sub>2</sub>, and Mercury). Additional co-benefits could be realized through the offsets component of the program, which would provide incentives for afforestation, improved agricultural manure management, and reduced consumption of natural gas, propane, and home heating oil. The auctioning of allowances will generate revenue that can be used to benefit the environment and energy planning (e.g., through investments in energy efficiency and clean energy technologies).

## **X. PUBLIC PARTICIPATION**

M.G.L. Chapter 30A requires MassDEP to give public notice and provide an opportunity to review the proposed regulations at least 21 days prior to holding a public hearing. The hearing will be held in accordance with the procedures of M.G.L. Chapter 30A. The public hearing notice, proposed regulations and background document will be available on MassDEP's website at: [www.mass.gov/dep/public/publiche.htm](http://www.mass.gov/dep/public/publiche.htm).

Questions about this document may be addressed to:

Bill Lamkin at (978) 694-3294 or via email [william.lamkin@state.ma.us](mailto:william.lamkin@state.ma.us)

or

Will Space at (617) 292-5610, or via email [william.space@state.ma.us](mailto:william.space@state.ma.us).